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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CURS, NATHAN M	
ART UNIT	**PAPER NUMBER**
2633	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/974,907	PARK ET AL.	
	Examiner	Art Unit	
	Nathan Curs	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,10-13,17-22,26-28 and 31* is/are rejected.

7)☒ Claim(s) *8,9,14-16,23-25,29 and 30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, 10-13, 17-22, 26-28 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Lu et al. (US Published Patent Application No. 2002/0191247).

Regarding claims 1 and 18, Lu et al. disclose a system and method for adaptively controlling communications channels in a wavelength division multiplexing (WDM) optical network that performs wavelength selective switching (fig. 2 and paragraphs 0016-0019 and 0054), the system comprising: a wavelength and route manager (WRM) that determines a communications channel to be set up to satisfy a request for service between two network elements (A and B) (fig. 1, element 20 and paragraphs 0045, 0076 and 0078) using: a channel selection algorithm that uses at least one rule abstracted from a physical constraint on signal transmission through the optical network to select at least one wavelength for providing the communications channel between A and B and a constraint-based route validator for verifying that the at least one wavelength is viable (paragraphs 0056, 0057, 0075, 0076 and 0078) by calculating a link budget and determining settings for transmission equipment that supports the communications channel between A and B (paragraphs 0089-0097); and means for effecting the setup of the at least one wavelength between A and B to provide the communications

channel if the constraint-based route validation determines that the route is valid (paragraph 0077).

Regarding claim 2, Lu et al. disclose a system as claimed in claim 1 further comprising a service manager adapted to receive the requests for service, and exchange admission control signaling messages with edge network elements (fig. 1, element 20 and paragraphs 0009 and 0045).

Regarding claim 3, Lu et al. disclose a system as claimed in claim 2 further comprising a capacity manager adapted to: receive a request for connection capacity between specified network elements and determine if there is available capacity to satisfy the request on an existing communications channel between the specified network elements (fig. 1, element 20 and paragraphs 0045 and 0075); if there is available capacity on an existing communications channel, allocate the capacity to the service request, and return a message to the service manager identifying the existing communications channel and if a communications channel with available capacity does not exist to send a message to the WRM requesting that a channel be set up to satisfy the service request (paragraphs 0076-0078).

Regarding claims 4 and 19, Lu et al. disclose a system and method as claimed in claims 1 and 18, respectively, wherein the channel selection algorithm comprises: a route selector adapted to select a route between A and B from a set of routes in accordance with at least one selection criterion (paragraphs 0056, 0057, 0075, 0076 and 0078); and a wavelength selector adapted to select the at least one wavelength for the communications channel on the selected route (fig. 2, element 440 and paragraphs 0045).

Regarding claims 5 and 20-22, Lu et al. disclose a system and method as claimed in claims 4 and 19, respectively, wherein the route selector further comprises a route evaluation algorithm adapted to: determine a value associated with at least one of a number of optical links

in the route (fig. 1, elements 60 and paragraphs 0045 and 0060); a sum of lengths of the optical links in the route (paragraphs 0056 and 00657); and, a sum of costs associated with each optical link in the route, for each route evaluated and use the determined value of each route to select a route with a preferred value (paragraphs 0060, 0073, 0074 and 0097).

Regarding claim 6, Lu et al. disclose a system as claimed in claim 4 wherein the wavelength selector is adapted to select the at least one wavelength subject to the following constraints: each of the at least one wavelengths is not indicated to be currently used on any section in the route (paragraphs 0075, 0076 and 0078); and if regeneration is required, a regenerator is available to regenerate the at least one wavelength in response to regeneration opportunity information (fig. 3, element 500 and paragraph 0059).

Regarding claim 7, Lu et al. disclose a system as claimed in claim 6 wherein the wavelength selector is further adapted to access a data store in order to retrieve at least one of wavelength utilization information, and regeneration opportunity information (paragraphs 0073, 0074 and 0097).

Regarding claims 10 and 26, Lu et al. disclose a system and method as claimed in claims 1 and 18, respectively, wherein the constraint-based routing validator receives an identifier of the at least one wavelength selected by the WRM, and is adapted to: parse the at least one wavelength into respective sections, obtain parameters of transmission equipment in each of the sections, calculating the link budget, and communicate the settings to the transmission equipment that supports the communications channel between A and B (fig. 1, elements 60 and paragraphs 0045, 0060, 0076, 0078, and 0089-097).

Regarding claim 11, Lu et al. disclose a system as claimed in claim 10 wherein the sections are defined by a route selected by the WRM (paragraphs 0045 and paragraphs 0073, 0074 and 0097).

Regarding claims 12 and 27, Lu et al. disclose a system and method as claimed in claims 10 and 26, respectively, wherein the constraint-based route validator is further adapted to interface with a photonic control plane adapted to: store values of stable properties of transmission equipment and sections in the network; and request (or query) transmission equipment status information directly from the transmission equipment (paragraphs 0060, 0073, 0074 and 0097).

Regarding claims 13 and 28, Lu et al. disclose a system and method as claimed in claims 10 and 27, respectively, wherein the constraint-based routing validator further determines equipment availability to ensure that the at least one wavelength is available, and that the transmission equipment in the route is operating within established parameters; and, evaluates signal transmission viability across each of the at least one wavelength (paragraphs 0075, 0076 and 0078) by calculating the link budget and determining settings for transmission equipment (paragraphs 0089-0097).

Regarding claim 17, Lu et al. disclose a system as claimed in claim 13 wherein the constraint-based routing validator is further adapted to return a message to the WRM indicating that the channel is viable (paragraphs 0075, 0076, and 0078).

Regarding claim 31, Lu et al. disclose a system for adaptively controlling communications channels in an agile optical network, the system comprising a wavelength and route manager (WRM) that determines a channel to be setup to satisfy a request for service between two network elements (A and B) (fig. 1, element 20 and paragraphs 0045, 0076 and 0078) using a route selection algorithm and at least one generic rule to evaluate a given set of routes between A and B, in order to identify a route (paragraphs 0056, 0057, 0075, 0076 and 0078); a route-based wavelength selector adapted to select at least one available wavelength subject to a constraint that the at least one wavelength traces the selected route (fig. 2, element

440 and paragraph 0045); and a constraint-based route validator that: verifies a viability of the at least one wavelength by calculating a link budget and determining settings for transmission equipment for supports the communications channel (paragraphs 0089-0097) and effects the set up of the communications channel between A and B, if the viability is verified (paragraph 0077).

Allowable Subject Matter

3. Claims 8, 9, 14-16, 23-25 and 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

4. In the amendment of 3 February 2005, the applicant indicates an amendment to paragraph 0011 of the specification; however, the "amended" paragraph is unchanged from the originally filed paragraph 0011.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 18 and 31, and depending claims, have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

7. Any inquiry concerning this communication from the examiner should be directed to N. Curs whose telephone number is (571) 272-3028. The examiner can normally be reached M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached at (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

M. R. Sedighian

M. R. SEDIGHIAN
PRIMARY EXAMINER